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Nuclear acoustic resonance involving the nuclei of paramagnetic iron-group ions

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Abstract

The resonant absorption of ultrasound by the nuclei of paramagnetic iron-group ions is treated theoretically for the case in which the nuclei interact with the ultrasound by means of a hyperfine quadrupole interaction. The coefficient of resonant ultrasonic is calculated on the basis of this mechanism. The possible observation of acoustic resonance by means of the Mössbauer effect (with the isotope Fe57) is discussed. © 1972 Consultants Bureau.

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